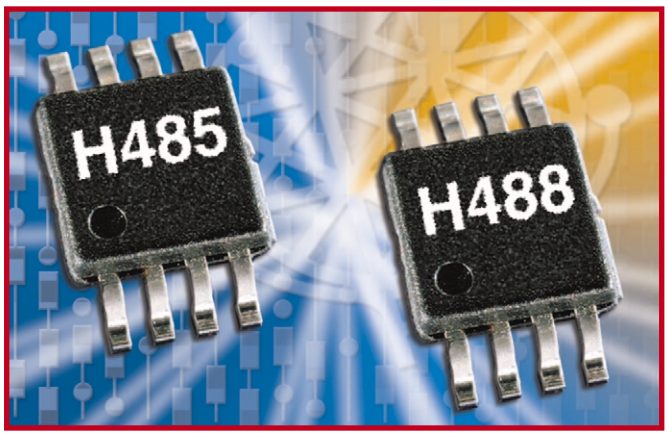
Hittite amplifier and mixers



Hittites' new amplifiers & mixers

Hittite Microwave Corp has four new High IP3 GaAs MMIC low noise amplifiers, ideal for receiver applications in wireless base stations.

These pHEMT LNAs operate from a single positive supply, feature a noise figure of 1dB or less, and output IP3 of up to +38dBm.

Also new are two mixers with integrated LO driver amplifiers. Requiring only 0dBm of LO drive, these GaAs MMIC mixers are for cellular/ PCS/3G infrastructure, fixed wireless and point to point applications, and can be driven from the output of a standard frequency synthesiser.

The HMC356LP3 amplifier exhibits 1dB noise figure, 17dB gain and +38dBm output IP3, and is designed for current and emerging GSM & CDMA cellular base station & mobile radio front-end receiver applications from 350 to 550MHz. For GSM & CDMA cellular receivers, the HMC372LP3 and HMC373LP3 are rated from 700/1000 MHz.

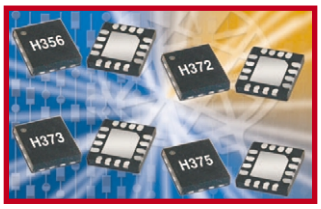
Both offer 1dB noise and 14dB gain, with +33dBm & +35dBm of output IP3 respectively.

Also offered is an amplifier bypass mode which exhibits only 2dB of loss and +50dBm of output IP3, consuming only 10µA of bias current.

HMC375LP3 is intended for GSM, CDMA & W-CDMA base station front-end receivers operating from 1.7 and 2.2 GHz.

The cascode topology of this amplifier results in 17dB of gain, 0.9dB noise, and an output IP3 of +33dBm.

Mixer HMC485MS8G, with an RF frequency range of 1.7-2.2GHz and IF frequency of CD 50-300 MHz, will satisfy any UMTS/PCS transmit or receive frequency plans that are configured for low side LO.



The input IP3 performance of +34dBm for down conversion and +27 dBm for up conversion is achieved from only 0dBm of LO drive.

The high P1dB of +20dBm rivals traditional active FET mixers offering a much smaller standard IC footprint.

The HMC488MS8G covers an RF and LO Frequency range of 4.0 - 7.0 GHz for applications in UNII, ISM and WLAN systems.

The ultra miniature double balanced mixer offers a wide IF frequency range of DC-2500 MHz, with LO to RF isolation of 30 dB and a conversion loss of less than 8 dB across its entire rated bandwidth.

www.hittite.com.

Ultrawideband market report

West Technology Research Solutions LLC, focusing solely on emerging technologies, has a new edition of its *Ultrawide band market report,* with in-depth analysis of two groups vying for the IEEE UWB spec.

"Our analysis demonstrates that the Multiband OFDM Alliance will likely win the standards race in the IEEE 802.15.3a working group.

Its main proponents have long planned for future integration of UWB into cognitive radio architectures, also preferred today by the FCC," says WTRS principal, Kirsten West.

"The opposing group favoring direct-sequencing UWB (DS-CDMA), led by Motorola, chose the short time-to-market solution that will enable them to gain market share early in consumer electronics applications.

"That explains strong support from Japanese companies. The DS-CDMA architecture in combination with a SiGe substrate is not capable of integrating multiple radio front ends.

"Not only is the Multiband OFDM technology capable of this, it can also support the development of a multi-protocol baseband architecture to support the utilisation of cognitive radio methodologies."

West maintains that in spite of these issues, market adoption of UWB will proceed as previously forecast. WTRS estimates, given a 4% global GDP growth rate, ultrawideband chipsets annual shipments into the communications segment alone will exceed 63m units by '07.

This newly expanded edition of the Ultrawideband Market Report and Analysis adds strategic analysis.

The report also details sales volume, unit shipments, and average selling price by vertical market segment as well as the geography, segmented into three global GDP growth scenarios.

Companies profiled include Aether Wire & Location, Alereon, AML Communications, Bridgestone Firestone Research, DaimlerChrysler, Datong Electronics, EADS Deutschland, Efficient Networks, General Atomics, Georadar, Grundig, Intel, Lockheed Martin, Motorola/XtremeSpectrum, Parco Merged Media, Parthus-Ceva, RF Technologies, Rhino Analytics, SAIC, Siemens, Staccato, ST Microelectronics, Time Domain,UltraDevices, Volvo, and Zircon.

Contact:http://www.west-techresearch.com/